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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/889,282	09/21/2001	Brian Sagar	069918.00000	2554

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EXAMINER

COLE, ELIZABETH M

ART UNIT

PAPER NUMBER

1771

DATE MAILED: 10/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/889,282

Applicant(s)

SAGAR, BRIAN

Examiner

Elizabeth M Cole

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 57-113 is/are pending in the application.
- 4a) Of the above claim(s) 74-81 and 106-113 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 57-73 and 82-105 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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1. Applicant's election without traverse of Group I is acknowledged.

Claims 57, 58 and 82 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 57, it is not clear whether the claim is limited to formulations of one or two pack retroreflective ink or if this is a statement of intended use. Also, there is no antecedent basis for "the printing process is carried out", in the last line of the claim. Similarly, in claim 58, there is no antecedent basis for "at elevated temperature at which the substrate is printed and cured." Also, it is not clear what temperatures would be considered to be elevated. This problem is also present in claim 82.

1. Claims 57-59, 61, 64-73, are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 03-259969 in view of Rizika et al, U.S. Patent 5,650,213. JP '969 discloses an ink composition comprising a binder material such as a polyurethane and a coupling agent such as a diisocyanate trimer. The JP '969 reference does not explicitly teach that the coupling agent is unreactive until it is at elevated temperature, but since JP '969 employs the same type of coupling agent, presumably the JP '969 coupling agent would have the same property. JP '969 differs from the claimed invention because JP '969 does not disclose incorporating either retroreflective microbeads and/or retroreflective flakes into the ink composition. Rizika et al teaches that retroreflectively coated microbeads may be included in ink compositions comprising polyurethane, acrylic or polyvinylidene chloride binders. See col. 4, lines 15-22. Rizika

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et al teaches that the microbeads are coated with a retroreflective coating by a method of coating a carrier web with an adhesive, applying the microbeads to the carrier web, and then vacuum depositing the retroreflective coating on to the beads. The microbeads are then incorporated into the ink composition. Rizika et al teaches that the ink composition may further include the additional components claimed in claims 61, and 94. See col. 8, lines 47-65. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated retroreflective microbeads as taught by Rizika et al into the composition of JP '969. One of ordinary skill in the art would have been motivated to employ the microbeads of Rizika in the ink of JP '969 in order to further enhance the appearance of the ink.

2. Claim 62 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP '969 in view of Rizika as applied to claims 57-59, 61, 64-73 above, and further in view of Yoshida et al, U.S. patent No. 4,985,484.

With regard to claim 62, neither Rizika nor JP '969 teaches the claimed proportions of microbeads to ink. Yoshida et al teaches at col. 5, lines 47-61, that the microcapsules may be present in an amount of less than 50%. Therefore, it would have been obvious to one of ordinary skill in the art to have employed less than 50% microbeads in the ink of JP '969 as taught by Yoshida et al. One of ordinary skill in the art would have been motivated to have employed less than 50% microbeads because Yoshida teaches that in general such ink compositions comprise less than 50% microbeads.

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Claims 63, 60, 82-104 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP '969 in view of Rizika as applied to claims 57-59, 61, 64-73 above, and further in view of WO 95/14248.

With regard to claims 63 and 69, 82-104, Rizika and JP '969 do not teach the particulars of the coated microbeads and do not teach incorporating flakes into the ink composition. WO 95/14248 teaches that the microbeads may be held on the carrier web with a styrene butadiene adhesive and may have silane coatings disposed thereon. WO 95/14248 teaches that special effects such as a bronze or silver appearance can be achieved by incorporating metal flakes in the ink. See pages 6, 13-14. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have employed a styrene butadiene adhesive and to have applied silane coatings to the microbeads during the process of manufacturing the beads as taught by WO '248. One of ordinary skill in the art would have been motivated to employ the silane coating in order to enhance the waterfastness of the beads, (see page 13, last paragraph) and to have employed a styrene butadiene adhesive in order to hold the beads securely on the web. One of ordinary skill in the art would have been motivated to add the metallic flakes to the ink in order to enhance the appearance of the ink by making it have a metallic appearance.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth M. Cole whose telephone number is (703) 308-0037. The examiner may be reached between 6:30 AM and 6:00 PM Monday through Wednesday, and 6:30 AM and 2 PM on Thursday.

Mr. Terrel Morris, the examiner's supervisor, may be reached at (703) 308-2414.

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Inquiries of a general nature may be directed to the Group Receptionist whose telephone number is (703) 308-0661.

The fax number for all official faxes is (703) 872-9306. The fax number for unofficial faxes is (703) 305-5436.

A handwritten signature in black ink, appearing to read "Elizabeth M. Cole". The signature is fluid and cursive, with the first name being the most prominent.

Elizabeth M. Cole
Primary Examiner
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e.m.c